

A
REQUEST FOR PROPOSAL
FOR
EAST MICHIGAN STREET
BRIDGE OVER THE MILWAUKEE RIVER
REHABILITATION PROJECT

ISSUED BY:
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION



Proposals must be submitted
No later than 4:00PM CDT

March 23, 2015

LATE SUBMITTALS WILL BE REJECTED

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Appendix A

- Original East Michigan Street Vertical Lift Bridge Plans
- Original East Michigan Street Vertical Lift Bridge Specifications
- Original East Michigan Street Vertical Lift Bridge Shop Drawings

Appendix B

- 2013 Underwater Dive Inspection Report
- 2014 Annual Bridge Inspection Report

Appendix C

- Professional Services Contract (Not required to be submitted with RFP)
- Insurance Requirements
- Small Business Enterprise Provisions

I. Introduction and Background

The City of Milwaukee proposes to rehabilitate the East Michigan Street Vertical Lift Bridge over the Milwaukee River (P-40-886). The bridge was constructed in 1978 and has a sufficiency rating of 61.2. The project, as proposed, consists of rehabilitating the existing bridge's structural, electrical, hydraulic, and mechanical components, and the operator's house. Approach roadways will also be rehabilitated as needed with this project.

It is the intent of this project to provide a rehabilitated bridge that addresses all of the City's safety and operational concerns, and meets all state and federal requirements.

II. Scope of Project

The selected consultant will perform an in-depth inspection of the bridge for condition to decide the need for renovation or replacement of the various components including structural, mechanical, hydraulic, electrical, and the bridge house. This in-depth inspection will be conducted under a separate "Phase I Contract" by the selected consultant. The Phase I Contract will specify that the consultant must disclose all of its findings in a final report and that this report from the inspection will be used to finalize the scope of work for the Phase II final design services contract. The final report from the inspection will become the property of the City of Milwaukee. The City will reserve the right to use the report and all of its contents in negotiating a design services contract amendment to provide final plans, specifications, and cost estimate (Phase II Contract) with any consultant should the City fail to come to a negotiated agreement with the selected consultant.

The consultant will be expected to provide service to answer questions during all phases of construction, review all shop drawings and other submittals, prepare or review changes, issue addenda and assist contractors with questions regarding all work. The compensation for additional services during construction (Phase III Contract) will be compensated in a future amendment to the original contract.

The Phase II Contract for design services to be performed under this project include, but are not limited to, the recommendations found in the report prepared by the selected consultant and include complete plans, specifications, and estimates for the East Michigan Street Bridge rehabilitation project.

Rehabilitation shall consist of complete deck and superstructure replacement at the lift span except the main girders, jacking beam, and floor beams (if useable in new design) with the deck designed to be a solid surface system; fixed span improvements; lift span mechanical, hydraulic, and electrical system improvements; operator's house improvements; and necessary approach roadway improvements.

The chosen consultant must meet the 18% Small Business Enterprise Program requirements. Information about this program is included in Appendix C.

Design services shall be performed in accordance with the requirements and standards of current editions of the WisDOT's Facilities Development Manual (FDM), the WisDOT Bridge Manual, the WisDOT Standard Specifications for Highway and Structure Construction, AASHTO LRFD Movable Highway Bridge Design Specifications, latest edition, and the AASHTO LRFD Bridge Design Specifications, latest edition. Final contract documents are to be prepared in the WisDOT's

format and will become the property of the City of Milwaukee. The Project will be let by the City of Milwaukee with 100% local funds.

III. Design Services Requested

The consultant will design and evaluate, where specified, all the necessary structural, electrical, hydraulic, and mechanical components for the renovation and operation of the existing bridge including preparation of the final plans, specifications, quantities, and itemized cost estimates. The consultant will also do the necessary correspondence with all the involved affected companies or agencies, including but not limited to the Wisconsin Department of Natural Resources, the U.S. Army Corps of Engineers, and US Coast Guard to fulfill the requirements needed for the rehabilitation work. The most recent inspection reports and original plans are included in the Appendix of this report.

The consultant will be expected to provide services to answer design related questions during all phases of construction, issue addenda, and assist the contractors with questions regarding the contract documents.

A. Surveys

The consultant will perform necessary surveys, stakeout and collection of required field information to allow project implementation. Survey information shall be sufficient to allow performance of the following tasks and items:

1. Utility Coordination
2. Roadway Plans

The background survey will include elevation and locations of curb, gutter, flange, ¼ point, and centerline at 25 foot stations; all manholes, water gate valves, utility poles, trees, bushes, planters, walls, fences, buildings within or near the right of way, and any other features that would be considered during design activities. Furthermore, where the proposed roadway intersects existing cross streets, the survey shall included detailed elevations at 10-foot intervals for 30 feet on either side of East/West Michigan Street. Existing elevations shall be collected at all walks, driveways, steps, etc. at the right of way line and back to existing buildings.

The vertical datum shall be in reference to the City of Milwaukee vertical datum.

B. Utilities

Work under this contract will include the following:

1. Coordinating with City Communications
2. Coordinating with City Street Lighting
3. Coordinating utilities for the bridge house (sewer, gas, telephone, and water)
4. Coordinating 480V electrical service for each side of the bridge
5. Coordinating with other utilities, as needed (AT&T, Time Warner Cable, etc.)

C. Agency Coordination

The consultant shall coordinate with local, state, and federal agencies having a potential interest in or jurisdiction over the project and supply them with information concerning the project, including 30%, 60%, 90%, and final design plans. Coordination will be formally communicated through a letter.

Contact with these agencies shall be made early enough in the development of the project to enable them to make a timely response so that their comments can be considered at the appropriate stage of services under this contract.

The consultant shall keep the City fully informed of its coordination efforts with all agencies.

1. Section 9 Permit:

Reconstruction or modification of an existing bridge across navigable waters of the United States is under the jurisdiction of the U.S. Coast Guard. The scope of work at the East Michigan Street Lift Bridge may include work within the waterway. Therefore a Section 9 permit may be required as part of the project. The consultant will coordinate with the U.S. Coast Guard and complete all work necessary to receive a Section 9 permit, if required.

2. Section 401 and 402 Certifications:

The consultant shall evaluate the effects of the project on water quality, in accordance with the provisions of the Clean Water Act and Chapter TRANS 400, Wisconsin Administrative Code and the procedures as set forth in the Facilities Development Manual. If the scope is to include substructure repair work near the water line Section 401 and 402 applications may be required.

3. Section 10/404 Permits

There may be work in the navigable water as part of this bridge rehabilitation where a section 10/404 Permit may be required. Coordinate with Wisconsin Department of Natural Resources and U.S. Army Corp. of Engineers and complete all work necessary to complete a Section 10/404 Permit, if required.

4. Contaminated & Hazardous Materials:

An asbestos and abatement inspection has not been performed on the bridge or bridge house. The consultant is required to perform an asbestos inspection and prepare and coordinate a plan with the Wisconsin Department of Natural Resources (WDNR). The existing steel superstructure may contain lead paint and the consultant should test the paint so paint removal is addressed by the appropriate special provisions.

5. The consultant will be required to coordinate with the following state and federal agencies:

- a. Wisconsin Department of Natural Resources SE District regarding overall project impacts, permits, and the potential presence of threatened and endangered species.
- b. U.S. Coast Guard, 9th Coast Guard District
- c. U.S. Army Corps of Engineers, St. Paul District regarding any applicable permits
- d. U.S. Fish and Wildlife Services (FWS)

- e. Wisconsin Department of Administration – Coastal Zone Management Program (WDOA)

D. Meetings

Meetings may be scheduled at the request of the consultant or City for the purpose of discussing and reviewing the services under this contract. It is assumed seven (7) such meetings shall be held to plan, review, and coordinate the project with the City's staff.

1. One (1) 30% Plan Review meeting will be held for this project.
2. One (1) 60% Plan Review meeting will be held for this project
3. One (1) 90% Plan Review meeting will be held for this project

The consultant shall hold one (1) Operational Planning Meeting (OPM) to discuss the organization and processing of the services under this contract. The consultant shall prepare and send the OPM meeting invitations to all interested utilities and agencies. A meeting agenda will be provided by the consultant one week prior to the OPM to the City. Following the meeting, the consultant shall prepare meeting minutes and send a copy to all interested parties.

The consultant shall hold one (1) Public Involvement Meeting (PIM) where they will be responsible for providing project displays and answering questions and comments in relation to the project.

The consultant shall prepare renderings for the aesthetic improvements to the bridge house, railings, and structure and present these to one (1) Milwaukee Arts Board meeting for review and approval.

One (1) meeting will be held in reserve as needed.

Meeting schedules are to be coordinated with the City to ensure that representatives are available to attend the meetings.

E. Roadway

Roadway approaches appurtenant to replace bridge components will be replaced as necessary. Proposed roadway geometrics will meet all WisDOT criteria.

The consultant shall include traffic control and detour plans in roadway plans, specifications, and estimates.

The consultant will investigate and design, if necessary, new traffic signal preemption as it relates to roadway closures during bridge opening.

The consultant will be required to prepare all design plans in accordance with the requirements and standards of the FDM and the WisDOT Standard Specifications for Highway and Structure Construction with software that is compatible with MicroStation V8i (Select Series 1).

The consultant will be required to have the final plans stamped by a registered professional engineer licensed in the State of Wisconsin. The consultant will also be required to provide

assistance to City staff during construction activities if questions regarding the plans and specifications arise.

F. Michigan Street Vertical Lift Bridge (P-40-886)

1. General

- a. The consultant shall prepare preliminary and final designs and plans for the following items and further supplement them by the In-Depth Bridge Inspection Report and Rehabilitation Recommendations prepared under the Phase I Contract:
 - i. Structural designs and plans for the following:
 1. Rehabilitation of two (2) fixed approach spans, including abutments.
 2. Replacement of the vertical lift movable span, including: steel members as needed; conversion to a solid surface exodermic deck; modifications to the lifting legs and jacking beams to accommodate the revised hydraulic system with skew control; and rehabilitation and reconfiguration of the two (2) movable span piers.
 3. Rehabilitation of the bridge operator's house.
 - ii. Electrical designs and plans for vertical lift span operation equipment, navigation lighting, substructure lighting, and other lighting and electrical items necessary for the operation of the lift bridge and operator's house.
 - iii. Review remote system to ensure that the system to operate the St. Paul Avenue Bridge from the Michigan Street Bridge is functional with all new equipment installed as part of this project. The remote operation system was upgraded as part of the St. Paul Bridge Rehabilitation.
 - iv. Mechanical and hydraulic designs and plans for vertical lift span operation equipment.
 - v. Architectural design and plans for the bridge operator's house rehabilitation.
 - vi. Designs and plans for plumbing, water, and other utilities required for the bridge operator's house rehabilitation.
- b. No Structure Survey Report (SSR) will be prepared as this project is 100% City funded. A Wisconsin DOT Bureau of Structures preliminary plan and SSR e-submittal and review is not required for this project. Preliminary Structure Plans will be completed during the preliminary phase of this project under this contract and submitted to the City. See Item (2) below.
- c. The consultant shall develop Final Structure Design and Plans for the rehabilitated structure over the Milwaukee River using current AASHTO Standard Specifications.
- d. All standards and materials for the design will be in compliance with the following:
 - i. American Association of State Highway Transportation Officials (AASHTO), latest edition.
 - ii. AAHSTO LRFD Bridge Design Specifications, latest edition.

- iii. AAHSTO LRFD Movable Highway Bridge Design Specifications, latest edition.
 - iv. Wisconsin Bridge Manual, latest edition.
 - v. State of Wisconsin Standard Specification for Highway and Structure Construction, latest edition.
 - vi. Statutes of the State of Wisconsin.
 - vii. Ordinances of the City of Milwaukee.
- e. Although the East Michigan Street In-Depth Inspection Report provided under Phase I contract becomes a basis for the rehabilitation work plan and project scope, the consultant shall provide any additional investigation, inspection, testing, and calculations deemed necessary to supplement the Inspection Report to allow the consultant to develop final structure plans and specifications.

2. Preliminary Plan Development

The consultant shall prepare preliminary design and plans and refine the design concept for the proposed East Michigan Street Bridge, in accordance with the procedures set forth in the WisDOT Bridge Manual. The completed preliminary plan shall show the structure plan, elevation and typical cross section, and all pertinent data shall appear on the first sheet(s) of the completed structure plans. Four prints of this plan and the Structure shall be submitted for review. The City will review the preliminary plan and return one print to the consultant showing requested revisions, if any.

- a. Preparation of the preliminary bridge plan will consist of the following sheets:
- i. General Plan and Elevation
 - ii. Typical Bridge Section
 - iii. General design notes, design data, and preliminary listing of bid items
 - iv. Substructure Plan (Preliminary)
 - v. Machinery Layout (Preliminary)
 - vi. Hydraulic Layout (Preliminary)
 - vii. One-line electrical diagram (Preliminary)
 - viii. Bridge House Rehabilitation Plan & Elevations (Preliminary)
- b. The consultant shall complete the following tasks relative to the design of the rehabilitated bridge across the Milwaukee River:
- i. Evaluation of the bridge aesthetic enhancements, focusing on an improved operator's house roof line and bridge railing. These amenities will be discussed with the City during development.
 - ii. Refinement of the vertical lift span design concept and design criteria for structural, hydraulic, mechanical, and electrical system. It is assumed that the electrical and hydraulic controls utilized for either the Wisconsin Avenue Vertical Lift Bridge or the St. Paul Avenue Vertical Lift Bridge will be the starting point for the hydraulic and electrical controls preliminary design development for the East Michigan Street Bridge.
 - iii. Refine the design of a solid surface lightweight exodermic deck in conjunction with the design of the hydraulic system, counterweights and mechanical systems.
 - iv. Further evaluate implementing a traffic resistance barrier to replace the existing bumper beam system and traffic gates.

3. Structural Final Design Phase

The consultant shall assume the following relative to preparing the estimated level of effort for this contract.

The consultant will evaluate, design, and provide plans, specifications, and cost estimate to renovate, rehabilitate, or replace the existing bridge structural component to include, but not be limited to, those items listed below:

- a. Replace all primary and secondary steel members on the lift span, except the main girders, jacking beams, and floor beams (if floor beams can be used in the design of a solid surface deck), make repairs and/or strengthen existing steel members to remain as required. Replace the open steel grating with a solid surface deck system. Replace sidewalk plates with new fiberglass sidewalk plates.
- b. Replace existing lift span open finger joint with a compression seal joint with a new gutter below the joint.
- c. Existing steel counterweights may be considered for reuse if salvageable. Additional weight will be added as necessary.
- d. The fixed spans will be rehabilitated including replacement of the deck, replacement of the joints, replacement or rehabilitation of the bearings, and cleaning and painting of the existing steel superstructure.
- e. The existing abutments will be rehabilitated, including concrete surface repairs and epoxy injection crack repairs as required, followed by concrete staining.
- f. The existing piers will be rehabilitated, including concrete surface repairs and epoxy injection crack repairs as required including any leaking cracks in the pit area. Reconfiguration of the hydraulic jack pedestals, four new columns per pier for the counterweight shaft bearings, and the two new roller guide struts. Other improvements will be made to the pier walkways including rehabilitation of the pier railings, pier access ladders, and stairways. Following repairs, concrete staining will be applied.
- g. The bridge railings will be replaced with a two-line FHWA crash-tested rail at the curb line and a code compliant pedestrian rated railing at the exterior edge of the sidewalk.
- h. Replace existing wood marine dock fenders on the main channel side of the piers.
- i. Sandblast and paint all existing steel members with three coat paint system.
- j. Hot dip galvanize and paint all new structural steel with a two coat paint system.
- k. It will be the Contractor's responsibility to obtain any required permits and be responsible to meet the requirements of local codes.
- l. For the purpose of this contract it is assumed that the use of a circular stairway and other types of existing access to the operator's house and lower pier levels will be maintained. Access improvements will be designed so that they will be constructed per OSHA standards.
- m. It is not anticipated that underwater inspection will be performed as part of this contract.
- n. In addition to final design and plan development, the consultant shall complete the following tasks relative to the structural components of the rehabilitated bridge across the Milwaukee River:
 - i. Participate in the 30%, 60%, and 90% review meeting by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate

- iv. QA/QC review of the structural plans, special provision, and calculations at the 90% complete level
- v. Bid Assistance

4. Electrical Final Design Phase

A complete electrical control system and distribution system will be provided for the rehabilitated vertical lift bridge. The plans will provide full details of key components mounted on the structure. A new dual source electrical utility service will be provided. The new distribution system 277/480 volts, 3 phase, 4 wire to both piers. Step down transformers will be used to provide 120/208 volt, 3 phase service for pier lighting, control tower lighting and receptacles and will also provide power for the traffic barrier gates. The control logic will be fully detailed on schematic diagrams with full cross reference provided between relay contacts and relay coils and between schematic drawing sheets.

- a. Rehabilitation plans shall include the following improvements:
 - i. Replace drip loops with new conduits across the lift span with all new electrical items.
 - ii. Provide another (dual) electrical service to the bridge to eliminate the generator.
 - iii. Provide simplified design with components inside the operator's house with easy accessibility for the new traffic barrier controls.
 - iv. Provide new control wiring and conduit throughout the bridge and operator's house for bridge operation.
 - v. Review remote system to ensure the system remotely operating the St. Paul Avenue Bridge from the Michigan Street Bridge is functional with all new equipment installed as part of this project. The remote operation system was upgraded in 2014 as part of the St. Paul Avenue Bridge Rehabilitation.
 - vi. Inspect and review CCTV cameras, control panel, monitors, and wiring to ensure proper functionality.
 - vii. Review dedicated communication lines into the bridge house for telephone and internet connection to ensure lines are functioning correctly.
 - viii. Replace the electrical control system.
 - ix. Replace the existing traffic gates and bumper beam assembly with a new system, possibly barrier gates if space allows.
 - x. Provide fiber optic cable from Michigan Street Bridge to Wisconsin Avenue Bridge to connect to centralized cable to Milwaukee City Hall.
 - xi. Other improvements, as found during in-depth inspection.
 - xii. Design of the following items will be completed by the consultant but installation will be completed by City of Milwaukee Forces during the construction phase.
 - 1. Provide new lighting within the control tower, on the lift span, and in the pier pit area.
 - 2. Provide new navigation lighting and wire.
 - 3. Provide new 20 amp electrical outlets in piers and pit areas. Provide one on each end of the pier and one in the pit.
 - 4. Provide individual sump pump for each pit.
 - 5. Provide LED architectural lighting to highlight key features of the bridge, bridge house, and remove and reinstall ornamental LED bulb lighting under the exterior walls similar to other downtown bridges.

- b. Preparation of final bridge plans will consist, as a minimum, of the following items:
 - i. Final One Line Diagram
 - ii. Operator's house control power wiring conduit layouts
 - iii. Approach span and lift span control power wiring conduit layouts
 - iv. Pier control power wiring conduit layouts
 - v. Complete limit switch mounting details
 - vi. Pier and structure grounding plans and details
 - vii. Traffic gate and traffic signal details
 - viii. Panel board and transformer schedules
 - ix. Final control console layout
 - x. Relay cabinet and switchboard cabinet details
 - xi. Fully detailed and cross referenced control schematic diagrams
 - xii. Wiring schedule, circuit routing schedules and raceway schedules
 - xiii. Possible upgrades of existing system for remote control operations from St. Paul Avenue Bridge as well as local control at the Michigan Street Bridge
 - xiv. Details that are assumed to be prepared by the contractor, submitted as shop drawings, and will not be included in the plans including PLC/Panel view cable connection details, I/O rack module group details, remote control flex I/O rack details and audio/video system cabinet details. Video, audio and remove communication system concepts and specifications will include only enough detail in order for the contractor to bid on the project, detail sheets will not be provided.
 - xv. The consultant will require the electrical contractors to assemble operational and maintenance manuals for the systems provided. The contract specifications will detail a very specific minimum level of information that must be included in these manuals. Consultant review and approval of these manuals is not included in this contract. Those services are anticipated under a future construction services phase of the project.
 - xvi. The following items shall be incorporated into the final plans by the consultant but the construction phase will be completed by City of Milwaukee Forces.
 - 1. Operators house lighting plans
 - 2. Approach span and lift span lighting plans
 - 3. Pier lighting plans
 - 4. Lighting and receptacle plans for the operator house, machinery areas, and roadway lighting will be developed to meet current AASHTO, IES, and municipality standards.
- c. The standard, materials, equipment, and component items of the electrical system will be designed to be in compliance with the following:
 - i. American Association of State Highway Transportation Officials (AASHTO), latest edition
 - ii. AASHTO LRFD Movable Highway Bridge Design Specifications, latest edition
 - iii. AASHTO LRFD Bridge Design Specifications, latest edition
 - iv. National Electrical Code
 - v. Statues of the State of Wisconsin
 - vi. Ordinances of the City of Milwaukee
 - vii. A.E.E. Standardization rules
 - viii. Federal Navigation Rules
 - ix. WE Energies Guidelines
 - x. National Fire Protection Association

xi. Manufacturer's Recommendations

- d. In addition to final design and plan development, the consultant shall complete the following tasks relative to the electrical components of the rehabilitated bridge across the Milwaukee River:
- i. Participate in the 30%, 60%, and 90% review meeting by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate
 - iv. QA/QC review of the electrical plans and special provisions at the 90% complete level
 - v. Bid Assistance

5. Mechanical Final Design Phase

The mechanical tasks incorporate the design and plan development for the sheaves, ropes, shafts, bearings, and bearing supports for the counterweight assembly. The longitudinal and transverse equalizer assemblies will be removed. The tasks also incorporate design and plan development for the span guide and traffic gate barrier or bumper beam assembly, whichever is selected based on available space. Other improvements documented during the in-depth inspection shall also be included in the rehabilitation plans. These machinery components will meet the requirements of AASHTO unless stated otherwise in the design criteria. The plans will provide full details and material lists for the assemblies to balance and level the vertical lift bridge during an opening. The plans will provide full details of key components mounted on the structure.

- a. Rehabilitation plans shall include the following improvements:
- i. Remove the existing longitudinal and transverse equalizer systems, including but not limited to, equalizer drums, sheaves, wire ropes, and brackets.
 - ii. Remove the existing guide roller assemblies, including but not limited to, guide rollers, rails, and bearings. Provide new transverse and longitudinal guides at Pier 1 and Pier 2 lifting legs. The provided mechanical guide system shall be designed to take all lateral loads.
 - iii. Remove and replace the existing counterweight wire ropes with new drawn galvanized wire ropes.
 - iv. Remove and replace the existing counterweight.
 - v. Investigate refurbishing existing counterweight sheaves to include re-grooving, cleaning, and painting for new wire ropes.
 - vi. Investigate refurbishing existing counterweight sheave shafts.
- b. Preparation of mechanical bridge plans will consist, as a minimum, plans of the following items:
- i. Mechanical Demolition
 - ii. Mechanical System Layout
 - iii. Counterweight Machinery
 - iv. Counterweight Details
 - v. Span Guides

- vi. All mechanical components will be sized appropriately for the solid surface lift span deck.
 - vii. Traffic Barrier Gate or Bumper Beam Assembly
 - viii. The consultant will require the mechanical contractors to assemble operational and maintenance manuals for the systems provided. The contract specifications will detail a very specific minimum level of information that must be included in these manuals. Consultant review and approval of these manuals is not included in this contract. Those services are anticipated under a future construction services phase of the project.
- c. All standards, materials, equipment, and component items of the mechanical design will be in compliance with the following:
- i. ASTM Standards
 - ii. ANSI Standards
 - iii. AISI Standards
 - iv. AASHTO Movable Highway Bridge Design Specifications, latest edition
 - v. State of Wisconsin Specification for Highway and Structure Construction, latest edition
- d. In addition to final design and plan development, the consultant shall complete the following tasks relative to the mechanical components of the rehabilitated bridge across the Milwaukee River:
- i. Participate in the 30%, 60%, and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare Construction Cost Estimate
 - iv. QA/QC review of the mechanical plans, special provisions, and calculations at the 90% complete level
 - v. Bid Assistance

6. Hydraulic Final Design Phase:

A new hydraulic system will be provided for the rehabilitated vertical lift bridge. The plans will provide full details of key components mounted on the structure. New hydraulic power units will be provided that would operate four new jacking cylinders using flow dividers in the hydraulic system to maintain equal speed in the four jacking cylinders, thereby eliminating the need for a mechanical equalizer system. New hydraulic lines would be provided between the new HPU and the new jacking cylinders. The new jacking cylinders would be of the existing plunger type with total capacity of the four new cylinders increased from that of the existing two cylinders. Existing hydraulic brakes and cabinet would be removed, as would the existing mechanical equalizers and neither would be replaced. Other improvements as documented during the in-depth inspection shall be included in the rehabilitation plans.

- a. Rehabilitation plans shall include the following improvements:
- i. Remove the existing hydraulic operating system, including but not limited to, hoist mechanisms (jacks), pedestals, piping, supports, hangers, and hydraulic power unit.

- ii. Remove the existing hydraulic braking system, including but not limited to, caliper brakes, support brackets, piping, hoses, brackets, and hydraulic power unit.
 - iii. Hydraulic cylinders shall be designed with sufficient capacity to carry all vertical loads in the event of a single cylinder failure.
 - iv. Provide electrically linked and controlled hydraulic operating systems consisting of 2 cylinders each mounted through openings at the ends of the new counterweight for each pier.
 - v. The intent of the new hydraulic operating systems are to control transverse and longitudinal skew of the span allowing for the elimination of the existing mechanical equalizer system.
- b. Preparation of final bridge plans will consist, as a minimum, of the following items:
- i. Final schematic diagram, including component schedule
 - ii. HPU plan, elevation, and details
 - iii. The new hydraulic power unit at Pier 1 will operation the new jacking cylinders using flow dividers in the hydraulic system to maintain equal speed in the four jacking cylinders, thereby eliminating the need for a mechanical equalizer system.
 - iv. Approach span and lift span piping layouts
 - v. Hydraulic jacking cylinder configuration
 - vi. Hydraulic jacking cylinder mounting details and accessories
 - vii. All hydraulic components will be sized appropriately for the solid surface lift span deck.
 - viii. The consultant will require the hydraulic contractors to assemble operational and maintenance manuals for the systems provided. The contract specifications will detail a very specific minimum level of information that must be included in these manuals. Consultant review and approval of these manuals is not included in this contract. Those services are anticipated under a future construction services phase of the project.
- c. In addition to final design and plan development, the consultant shall complete the following tasks relative to the final hydraulic components of the rehabilitated bridge across the Milwaukee River:
- i. Participate in the 30%, 60%, and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate
 - iv. QA/QC review of the hydraulic plans, special provisions, and calculations at the 90% complete level
 - v. Bid Assistance

7. Operator's House Architectural Final Design Phase

The following tasks will be performed for the architectural rehabilitation of the operator's house. The consultant shall prepare plans, specifications, and estimates for the components of the Operator's House. This material shall be included as part of the PS&E package for the rehabilitated bridge.

- a. Major exterior improvements include rehabilitating the stairway from the sidewalk down to the second level of the control house, including the landing at the base of these stairs, replacing steel doors with fiberglass doors, possibly removing and rebuilding the south CMU control house wall (dependent upon access necessary for the hydraulic equipment replacement), waterproof the south wall, clean and/or apply stain coat to the exterior walls, epoxy paint floor with speckled paint and clear coat hardener, insulate attic crawl space, replace the windows in the Control Room, replace the wall panels between the windows, replace the soffits and fascias, repair exterior window sills, and replace the roof. Other improvements, as documented in the in-depth inspection, shall also be included in the rehabilitation plans.
- b. Prepare rendering for a minimum of two roof styles different from the original for review and selection by the City and the Milwaukee Arts Board. Prepare final plans of the selected roof style.
- c. Primary interior improvements include patching plaster walls, painting walls, cleaning floors, and replacing Equipment Room cabinetry and furnishings. Other improvements, as documents in the in-depth inspection, shall also be included in the rehabilitation plans.
- d. New and rehabilitated components shall meet the requirements of the following design codes: The Wisconsin Division of Safety and Buildings Administrative Code, ASCE 7-95 Minimum Design Loads for Buildings and Other Structures, Standards of the American Institute of Steel Construction (AISC), American Concrete Institute (ACI), and other applicable industry standards will be observed.
- e. A set of Contract Drawings and any Special Provisions will be prepared, suitable for complete bidding. The drawings shall consist of all floor plans and a roof plan, exterior elevations, cross sections, and longitudinal sections through the building, and detail sections as necessary to convey the rehabilitation and improvements. Special Provisions will be prepared in the WisDOT format for all "Architectural" materials used which are not included in the WisDOT's Standard Specification.
- f. In addition to design and plan development the consultant shall complete the following tasks relative to the operator's house:
 - i. Participate in the 30%, 60%, and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate
 - iv. QA/QC review of the architectural control house plans, special provisions, and calculations at the 90% complete level.
 - v. Bid Assistance

8. Operator's House Mechanical/Electrical/Plumbing Final Design Phase

The following tasks will be performed for the M/E/P rehabilitation of the operator's house. The consultant shall prepare plans, specifications and estimates for the components of the control house. This material shall be included as part of the PS&E package for the rehabilitated bridge.

- a. Major improvements include replacing electrical equipment, replacing lights, replacing and installing additional receptacles, replacing conduit and outlet boxes, improving the heating and cooling system, replacing the toilet and water heater, removing generator set and all venting, and remove oil tank and all associated tank piping. Other improvements, as documented during the in-depth inspection, shall also be included in the rehabilitation plans.
- b. A set of Contract Drawings and any Special Provisions will be prepared, suitable for competitive bidding. The drawings shall consist of all floor plans, elevations sections, and details as necessary to convey the rehabilitation and improvements. Special Provisions will be prepared in the WisDOT format for all M/E/P materials used which are not included in the WisDOT's Standard Specification.
- c. In addition to design and plan development, the consultant shall complete the following tasks relative to the operator's control house HVAC and plumbing:
 - i. Participate in the 30%, 60%, and 90% review meetings by teleconference. It is assumed that plan review comments will be transmitted to the technical task leads a minimum of 1 day prior to the teleconference.
 - ii. Prepare Special Provisions
 - iii. Prepare construction cost estimate
 - iv. QA/QC review of the M/E/P plans, special provisions, and calculations at the 90% complete level
 - v. Bid Assistance

IV. Submittals

The consultant shall submit to the City preliminary bridge plans for review and confirmation of design features. The following submittals are required:

1. Preliminary Plans (30%)
2. Preliminary Estimate (submitted with Phase I Inspection Report)
3. Intermediate PS&E Submittal (60%)
 - a. Plans
 - b. Special Provisions
 - c. Estimate
4. Draft Final PS&E Submittal (90%)
 - a. Plans
 - b. Special Provisions
 - c. Estimate
5. Final PS&E Submittal
 - a. Plans
 - b. Special Provisions
 - c. Design Computations
 - d. Quantity Calculations
 - e. Cost Estimate
 - f. QA/QC Verification Form
 - g. WisDOT Structure Inventory Forms
 - h. WisDOT Rating Summary Sheet

A. Plans, Specifications, and Estimates

1. The consultant shall prepare a complete PS&E package conforming to the City of Milwaukee Bid Package requirements.
2. The consultant shall provide one set of plans and specifications for each utility within the project limits for incorporation of the final comments prior to the PS&E submittal date.
3. The consultant shall provide the City final design drawing files in Microstation V8i dgn format. The consultant shall provide the City Special Provision documents in Microsoft Word Format. The consultant shall provide the City construction cost estimate in Microsoft Excel format.

B. Special Provisions

The consultant shall prepare Special Provisions for the specialty and non-standard bid items, including structural, mechanical, hydraulic, electrical and architectural items in WisDOT Format.

C. Cost Estimates

The consultant shall prepare preliminary and final construction cost estimates for all structural, mechanical, hydraulic, electrical and architectural items.

D. Bid Assistance

The consultant will be available during the bidding process to answer Contractor's questions regarding the intent of the plans and special provisions.

V. Schedule

Date:	Event:
February 16, 2015	Date of issue for RFP
March 6, 2015	Last day for submitting request for clarification
March 13, 2015	Written responses to requests for clarification
March 23, 2015	Proposals due
April 21, 2015	Interviews for consultants
April 28, 2015	Consultant Selection
May 11, 2015	Initial contract negotiations begin (Phase I)
May 25, 2015	Initial contract negotiations complete
June 1, 2015	Initial contract notice to proceed issued
July 20, 2015	Final inspection report due
August 10, 2015	Design services contract negotiations begin (Phase II)
August 31, 2015	Design services contract negotiations complete
September 8, 2015	Design services notice to proceed issued
November 9, 2015	30% PS&E to City
February 8, 2016	60% PS&E to City
May 9, 2016	90% PS&E to City
July 11, 2016	PS&E Date
August 8, 2016	Advertise Date

September 12, 2016
January, 2017
November 17, 2017

Let Date
Construction Start
Construction Completion

VI. Preparing and Submitting a Proposal

A. General Instructions

All proposals shall comply with the following instructions. These instructions are intended to ensure that submissions contain the information and documentation required by the City of Milwaukee Department of Public Works and submissions have a degree of uniformity in the presentation of material, which will facilitate evaluation by the City's Evaluation and Selection Committee.

The evaluation and selection of a consultant and the contract will be based on the information contained in the proposals plus references. Failure to respond to each of the requirements in the RFP may be basis for rejecting a response.

Elaborate submittals beyond that sufficient to present a complete and effective proposal, are not necessary or desired.

All material submitted pursuant to the RFP shall become the property of the City of Milwaukee, DPW. All documents pertaining to this RFP shall be kept confidential. No information about any proposals shall be released until the selection process is complete.

The selected consultant will be required to assume responsibility for all services offered in their proposal whether or not they perform them directly or through a subconsultant.

The top ranked firms who submit an acceptable written proposal may be required to make an oral presentation of their proposal to the consultant selection committee.

The consultant shall retain a complete project file that includes all submittals and approvals contained in these instruction and other pertinent documents to support project procurement, development, implementation, and cost.

B. Clarification and/or Revisions to the Specifications and Requirements

Any questions concerning this RFP must be submitted in writing by 4:00PM CDT on March 6, 2015 to:

Mr. Craig Liberto, P.E.
Structural Design Manager
City of Milwaukee
Infrastructure Services Division
841 North Broadway, Room 907
Milwaukee, WI 53202
Phone: (414) 286-3294
Fax: (414) 286-0475
Email: craig.liberto@milwaukee.gov

If a consultant discovers any significant ambiguity, error, conflict, discrepancy, omissions, or other deficiency in the RFP, the consultant should immediately notify the above named individual of such error and request modification or clarification of the RFP document.

In the event that it becomes necessary to provide additional clarifying data or information, or to revise any part of this RFP, revisions/amendments and/or addendums will be provided to all recipients of this initial RFP.

C. Incurring Costs

The City of Milwaukee is not liable for any cost incurred by the consultants in replying to this RFP.

D. Submitting the Proposal

Consultants must submit an original and five copies (six total) of all materials required for acceptance of their proposal by 4:00PM CDT on March 23, 2015, to:

Mr. Jeffrey S. Polenske, P.E.
City Engineer
City of Milwaukee
Infrastructure Services Division
841 North Broadway, Room 701
Milwaukee, WI 53202

The proposal must conform to the format and content prescribed in this RFP. The City reserves the right to reject any or all proposals that fail to adhere to this format and content.

Proposals must be received in the above office by the specified time stated above. All submittals must be time-stamped in the City Engineer's office by the stated time.

Proposals received after the deadline shall be returned to the sender unopened.

E. Proposal Organization and Format

Proposals should be typed and submitted on 8.5 by 11-inch paper bound securely. Proposals should be organized and presented in the order and by the number assigned in the RFP. Proposals must be organized with the following heading and subheadings. Each heading and subheading should be separated by tabs or otherwise clearly marked. The RFP sections which should be submitted or responded to are:

1. Cover Letter – The cover letter or executive summary should state briefly the key points of the firm's proposal
2. Table of Contents
3. Introduction/Identification
 - i. Names and addresses of all firms working on the job and where they are incorporated
 - ii. Where the firms are licensed to operate
 - iii. Contact information of individual authorized to negotiate a contract for the firm or team

4. Project Approach – Provide a description of the intended approach to accomplishing the various design elements associated with the rehabilitation including final products associated with each element. Also, identify a milestone schedule to complete the services by the specified completion date.
5. Firm/Team Background, Qualifications, and Experience
 - i. General description of the firm/team's background, specialties, etc.
 - ii. Approximate percentages and responsibilities for each firm on the team, if more than one firm is identified on the project.
 - iii. Identification of the firm/team's experience on similar projects.
6. Team Staff – Experience and Qualifications
 - i. Organization chart of the key team members
 - ii. Relevant experience of key team members
 - iii. Resumes of key team members
7. Summary of Manpower Requirements. Provide an hourly breakdown of tasks to be performed by each team member for Phase I (In-Depth Inspection), Phase II (Design Services), and Phase III (Construction Services) engineering activities. Provide an initial estimated level of effort in hours by employee classification as well as hourly pay, overhead rates and profit. The summary of manpower requirements shall be prepared using the WisDOT Work Order formatted tables. Phase I, II, and III shall be broken out individually showing the total hours and dollars for each phase and the project total. For purposes of initial estimating level of effort, refer to the assumptions in the Request for Proposal. Further negotiations with the consultant selected to complete the project after the Phase I In-Depth Inspection Report is reviewed and approved will establish the final level of effort and compensation for Phase II and Phase III Services.
8. The chosen consultant must meet an 18% participation rate in the Small Business Enterprise Program.

VII. Proposal Selection and Award Process

A. Preliminary Evaluation

The proposals will first be reviewed to determine if the format requirements are met. Failure to meet these requirements may result in the proposal being rejected.

The City of Milwaukee reserves the right to accept or reject any or all proposals and to waive irregularities and technicalities, which in its opinion would best serve the interests of the City. The City of Milwaukee reserves the right to make investigations and inquiries, as it deems necessary to determine the ability and qualifications of any submitting firm or team to perform the work or services requested.

B. Proposal Ranking

Accepted proposals will be reviewed by the evaluation committee and ranked with regard to the stated criteria.

C. Evaluation Criteria

The proposals will be ranked using, but not limited to, the following criteria:

1. Team Qualifications

2. Team's general experience with movable bridge engineering, bridge rehabilitations, and the WisDOT facilities development process.
3. Team's specific experience with individual services included in this RFP.
4. Staff Qualifications
5. Key team members' overall experience and qualifications
6. Key team members' availability
7. Project approach
8. Ability to complete the project on schedule
9. Estimated level of effort
10. Local presence to coordinate and administer the project
11. Small Business Enterprise participation

D. Notification of Intent to Begin Negotiations

All consultants who respond to this RFP will be notified in writing of the final selection and the City's intent to begin negotiations with the highest-ranking consultant.

E. Award and Final Offers

The proposals will be ranked and the City may request interviews with the top ranked firms. The selection of the most qualified consultant will be made based on evaluation criteria indicated in Section C above and the interview results. Contract terms will be negotiated with the consultant that submitted the highest-ranking proposal.

If the City and the highest-ranking consultant cannot agree on the contract terms, the terms will be negotiated with the next highest-ranking consultant, and so forth until an award can be made.

F. Contracts

The negotiated contract will be a Not to Exceed, Actual Costs plus Fixed Fee. Compensation for extra work will be negotiated on the basis of detailed hourly costs.

Payment will be made monthly upon receipt of the contractors billing statement and progress report.

Other than as noted herein, contact or communication, direct or indirect, on behalf of any consultant regarding this Request for Proposal with elected or appointed officials and/or City staff or representatives shall result in disqualification.

APPENDIX A:

Original East Michigan Street Vertical Lift Bridge Plans
Original East Michigan Street Vertical Lift Bridge Specifications
Original East Michigan Street Vertical Lift Bridge Shop Drawings

APPENDIX B:

2013 Underwater Dive Inspection Report
2014 Annual Bridge Inspection Report

APPENDIX C:

Professional Services Contract
Insurance Requirements
Small Business Enterprise Provisions